1:Vaillant A-5 (1928-1936)1941 NU7 Aztec NU7

The maguey plant, or agave, was important to household economy for its sap, which was fermented to make a kind of beer. Not only was this pulque used both as a tipple and a ceremonial intoxicant, but it had an important nutritive effect as well in counterbalancing the lack of greens in the Mexican diet. The plant itself had many other uses. Its fibers could be twisted into twine or rope and woven into containers or even clothing. The thorns were excellent needles and had a more lugubrious use as instruments for mortifying the flesh in religious penances. The leaves as a whole sometimes were employed in constructing shelters or roofing huts. Small wonder that the maguey and the corn plants were symbolized as goddesses and worshiped accordingly.

The Aztecs cultivated cotton in many varieties. Tobacco they smoked for the most part in hollow reeds as a sort of cigarette. Late in their history they also used elbow-shaped pipes, probably for some ceremonial purpose, much as our modern Pueblos restrict pipe smoking to rain-inducing rituals. They consumed quantities of copal gum as incense during religious ceremonies and obtained rubber from Vera Cruz and the south, as well as from the dwarf guayule plant found in northern Mexico. The Aztecs, like us, found this material indispensable to their culture, for balls in their ceremonial game, *tlachtli*, and as a gum to fix feathers and other adornments to costumes. Bitumen, which came from the oil seepages in Vera Cruz, had its function as an adhesive and as a body paint. In western Mexico the Indians prepared a serviceable lacquer which they used to coat gourds and wooden trays. This incomplete list of plants and substances cultivated and exploited by the Aztecs and their neighbors gives an idea of our deep indebtedness to these past civiliza-

1:Vaillant A-5 (1928-1936)1941 NU7 Aztec NU7

tions. The original inventors and innovators are lost in the black obscurity of American history, but the fruit of their ingenuity plays an important part in our modern economy.

As opposed to this wealth of plants, the Aztecs were poor in domesticated animals. They had several varieties of dog, one of which was bred for food, but they never used this animal for transport as did Indians of our Northern plains. The turkey was their chief domesticated fowl, although there is some evidence that they bred geese, ducks and quail also. In plantations of the nopal cactus they carefully tended the cochineal bug for the rich crimson dye it yielded when crushed. A second insect, the maguey slug, still retains its place as a delicacy of the Mexican table, served with another typically Aztec dish, *guacamole*,* a thick mixture of tomato, alligator pear and chile.

Hunting, when possible, produced food, but as early as Upper Middle Culture times the deer were nearly all killed off. The seasonal migrations of the birds, which still visit the lakes of Mexico, offered a profusion of geese, ducks and other wild fowl. Small fish, netted or speared with a trident, were sometimes consumed, and the eggs which a certain fly lays on the lakes were made into a paste still eaten in Mexican communities. The high functionaries, since they were supported by the community, kept a much better table than the poor, who lived meagerly off the produce of their own fields; the daily repast of Montezuma was described by the Spanish conquerors as the height of Lucullan luxury.[18]

Tools showed relatively little variation from Middle Culture to Aztec times. The *coa*, or digging stick, was the chief farming instrument, and the *metate* and *mano* even now re-

*Wah-ca-mo'-lay.

1:Vaillant A-5 (1928-1936)1941 NU7 Aztec NU7

duce the kernels of corn to flour. Stone tools still persisted for cutting and grinding, and cold, beaten copper was beginning to find favor as a material for needles, axes and ornaments. The volcanic glass, obsidian, because of its sharp edges and its abundance, was as satisfactory as most of their edged metal tools. The simple loom and the weighted spindle were sufficient equipment for the weavers, and pottery had a variety of uses in the storage and service of food. The bow, throwing stick, lance and club were the chief weapons. By and large, mechanical inventiveness was not conspicuous in Aztec culture, although craftsmanship, through the superior use of simple tools, was developed to a high degree, as we shall show in the next chapter. (See Plates 35, bottom right; 37, top left.)

The great cities of the Aztecs had their origin in the simple villages of sedentary tribesmen. Just as in their social organization and economy, there was a simple base, comparable to the settlements of some of our sedentary North American tribes. The houses on the outlying *chinampas* represented the primitive state of Aztec housing. These were huts with thatched roofs resting on walls of wattles smeared with mud, a type of shelter probably in use in Middle Culture times and persisting two thousand years later in the Indian villages of present-day Mexico. (See Plate 42.)

More imposing establishments graced the older portions of the city, where generations of successive residents had brought care, renovation and innovation to domestic architecture. Each house rested on a raised platform faced with stone, which gave some protection against floods. Rooms for social purposes, sleeping, cooking, storage and quartering slaves were arranged in a rectangular plan about a central

1:Vaillant A-5 (1928-1936)1941 NU7 Aztec NU7

that could tear through human flesh at a single stroke, and this type of knife, not found in earlier horizons, was produced commonly with the extra care in chipping which is to be expected in a ceremonial object. (See Plate 16.)

The three-legged *metate*, or grinding stone, was not better made in Aztec times than before. In Middle Culture and Toltec times it had an edge, so that the *metlapil* (son of the *metate*, i.e., *mano*, or grinding stone) was beveled and fitted within the confined space. The Aztec *metate* was flat, and the *mano* had swollen handles, projecting on either side of the grinding surface of the *metate*. I have never had the misfortune to break my back grinding corn in a *metate*, so that I have no way of knowing whether this represents a technical advance or a mere change in style.

The demands of ritual necessitated stone boxes for burning and storing human hearts. These boxes were pecked out of lava and lavishly decorated inside and out with reliefs, referring symbolically to the gods for whom the sacrifice was made. Some of these eagle cups (cuauhxicalli*) fall into that area of superior craftsmanship we designate in our own culture by the term "fine art." The great circular cup, ordered by Tizoc and miscalled the Sacrificial Stone, eight feet in diameter and two and one half feet thick, attained the stature of a monument. Stone incense burners, often in the form of the Old God, were common in Toltec and rare in Upper Middle Culture times. The quantity of religious sculpture, produced chiefly in late Aztec times, to judge from the style, did not detract from the quality of the workmanship, so strong was the control of religious and social factors.[2] (See Plate 55, bottom right.)

*kwow-shee-ca'lli.

1:Vaillant A-5 (1928-1936)1941 NU7 Aztec NU7

steps in every case. A final polishing with some simple abrasive like water and sand often completed the process. Some hard stones seem to have been detached from their matrix by applying the abrasive and sawing with a cord of rawhide or a tool of harder stone. The Middle American people also developed tubular drills of bone and reed, which, rotated by a bow and aided by an abrasive, could hollow out vases or bore out places that were otherwise inaccessible to the clumsy tools of the time.[8]

Save for descriptions and drawings, the destruction of time and man has left us only a few examples of the weaver's art. Weaving of some kind is very old, and no people, however primitive, exist in the world today who do not make at least some kind of basketry. Textiles are made as a rule by higher groups, but they are found in the American continent as part of the material equipment of peoples who had not yet learned how to make pottery. An early example of cloth, combining threads of cotton with some fiber like yucca, was found in the Lower Middle Culture horizon of Zacatenco.

The long practice of weaving must and did have a significant effect on decoration, for the rectangular patterns, to which the weaver is confined, influence all of Indian art in Continental America. Design and the arrangement of elements are more important than form in Indian art. While many geometrical patterns appear in pictures of Aztec clothing, fine embroidery could produce the effect of curvilinear designs or even naturalistic patterns drawn from the regional flora. Batik and tie dyeing also enriched the decoration of Aztec clothing. Other processes produced the effect of velvet and brocade, and some garments even imitated in tex-

J: Sahagun M-5 (1529-1590) 1951 NU7 Aztec NU7

584 age to marry, they spoke to him of their wish to seek a wife for him. And he replied, thanking them for this solicitude which they showed in marrying him. Then they addressed the leading man who had charge of all the young men, whom they called *telpochtlato*, and they told him that they wished their son to marry, since [the son] held doing so to be good. For this they held a great feast for him and for all the young men whom he had in his care; and for this they held conversation with him, after having given food and drink to him and to all those whom he had in his charge. And at the beginning of the conversation they laid before him an axe for cutting lumber or firewood. This axe was a sign that that young man took his leave, now, of the company of the other young men; for they wished him to marry. And thus the *telpochtlato* departed content. After this the relatives decided, among themselves, upon the woman whom they were to give [to the son], and summoned the marriage-makers, who were some old, honored women, that they might go to speak with the parents of the young woman. [The marriage-makers] went two or three times, and spoke, and returned with the reply. During this time, the relatives of the young woman spoke among themselves, and, having decided to give her to him, they gave their consent to the marriage-makers. After this they sought a day of good fortune, of a sign of good disposition [among] which were acatl, ocomatli, cipactli, quauhtli. Having chosen one of these signs, the parents of the young man made known to the parents of the young woman the day on which the marriage should be performed, and then began to prepare the necessary articles for the wedding—[those] to eat and to drink, as well as such [things] as capes, smoke tubes, and flowers. 585 This done, they summoned the leading men and all the other people whom they wanted for the wedding. After the feast and [after] many speeches and ceremonies, those acting for the young man came at about nightfall to take the young woman. They carried her, with great solemnity, upon the back of a matron, and with many pine torches burning in two rows before her. Many people surrounded her, behind and ahead, until they brought her to the house of the parents of the young man. Having brought her to the house of the young man, they set them both by the hearth, which they always had in the middle of a hall, full of fire. And the woman was at the left hand of the man. Then the mother of the young man

casarse, hablauanle en que le querian buscar su muger: y el respondia, haziendoles gracias, por aquel cuydado, que tomauan de casarle: luego hablauan al principal que tenja cargo de todos los mancebos, que ellos llamauan Telpuchtlato: y dezianle como querian casar su hijo, que lo tuujesse por bueno: y para esto hazianle vn combite a el, y a todos los mancebos, que tenja a su cargo, y para esto le hazian vna platica, despues de auerle dado de comer, y de beuer a el y a todos los que tenja a su cargo: y en principio de la platica, ponjanle delante vna hacha de cortar madera o leña. Esta hacha era señal que aquel mancebo se despedia ya de la companja de los otros mancebos: porque le querian casar, y ansi el telpuchtlato yua contento. Despues desto determjnauan entre si los parientes la muger, que le aujan de dar, y llamauan a las casamenteras, que eran vnas viejas honradas, para que fuessen a hablar a los padres de la moça, yuan dos, o tres vezes, y hablauan, y bolujan con la respuesta. En este tiempo los parientes de la moça se hablauan, y concertandose de darsela, dauan el si, a las casamenteras. Despues desto buscauan vn dia bien afortunado, de algun signo, bien acondicionado, quales eran acatl, ocumatli, cipactli, quauhtli, auiendo escogido algune destos signos: los padres del moço hazian saber a los padres de la moça el dia en que auja de hazerse el matrimonjo, y luego començauan a aperejar las cosas necessarias, para las bodas, assi de comer como de beuer, como de mantas, y cañas de humo, y flores. Esto hecho conbidauan a los principales, y toda la otra gente, que ellos querian para las bodas. Despues del combite, y de muchas platicas, y cerimonjas: venjan los de la parte del moço a lleuar a la moça de par de noche, lleuauanla con gran solennjdad, a cuestas de vna matrona, y con muchas hachas de teas encẽdidas, en dos rencles delante della, yua rodeada della mucha gente, detras y delante, hasta que la llegauan a la casa de los padres del moço: llegada a la casa del moço, ponjanlos ambos, junto al hogar, que siempre le tenjan, en medio de vna sala, lleno de fuego, y la muger estaua, a la mano izquierda del varon: luego la madre del mancebo, vestia vn vipil muy galano a su nuera, y ponjale junto a sus pies vnas naoas muy labradas: y la madre de la moça, cubria cõ vna manta, muy galana a su yerno, y atauasela sobre el hombro, y ponjale vn maxtli, muy labrado, a los pies. Hecho esto, vnas viejas, que se llaman titici, atauan la esquina de la manta del moço con la falda del vipil de la moça. Assi se concluya el

And upon the morrow, then the carpenters came forth and assembled as they arrived. They brought with them their tools; there were adzes and hatchets. Well they hewed and smoothed [the *xocotl*] where it had knots, where the limbs branched out, where it was uneven.

They hewed another pole five fathoms long. They joined it, [so that it would] strengthen the crown of the *xocotl*. They made the crown very even. They girded all the tip with ropes, fastening and placing [branches and pole] within the ropes.

And when this was done, thereupon the fire priests adorned it with papers. The old priests helped and also those who cast [victims] into the fire aided. These [last] were very powerful and tall—exceedingly tall and big. They were chiefs.

The first was named Coyotus; the second was named Çacancatl;[5] the third was named Ueicamecatl. As such were masked they who pressed ahead with adorning [the *xocotl*].

And the *xocotl* image they fashioned [as] of flesh; a dough of fish-amaranth seeds mixed with maize they formed [for this]. They provided pure white papers for it, which they set in place.[6] They bore no design.

Upon it they set [these]: its shoulder sash of paper; its paper breech clout; its paper[7] designed with falcons; its wig made of paper; its *xocotl* shirts, [of which there were] two. These were not put on, but were attached to the tree, in two incisions. Likewise they placed in another incision large pieces of paper, wide—a yard wide—and ten fathoms long, reaching down one-half the length of the *xocotl*.

And also they made three amaranth seed *tamalez*, pierced them with sticks, in three places, and set them upon [the image]. And thereupon they bound on the *xocotl* ropes half way up on the *xocotl*—ten [of them].

And when all made ready, thereupon they raised it. And then there was much crying out and shouting.

They said: "Go on, there, braves! Pull with all your force!"

Thereupon they went to setting it upright; they went about raising it [by using] the wooden supports and prying it with a lever. And likewise as it moved, as it proceeded to rise, there was much clamor, much shouting, great din.

Auh in otlatvic: njman oalhuj, oalnechicavi in quauhxinque, qujoalinquj, intlaquj oalietiuh in matepoztli, tlaximaltepoztli, vel qujpetlaoa, qujnipetzoa, in vncan yize, in vncã titicujtztic, in vncã xiripochtic.

796x 778 [412 963]

Oc ce qujxima quaoacatl macujlmati: qujtlaçalhuja, qujtoctia in jtcalo xocotl, vel cõnevivilia in jtcalo, in jquapitzaoscan, qujmecatecuja, qujmecacuja, qujmecacitlantlalia.

Auh in ie iuhquj: njmã ie ic qujtlamamaca, in tlenamacac, tlapalevia in quaquacujlti, no ichoantin tlapalevia, in tetlepãtlaque. Eintin, cenca chicaoque, quaquauhtique, quauhticapopol, quauhcholpopol, tetecutin catca.

[793]

In ce itoca: coioca. Injc vme, itoca: çacancatl. Injc ei, itoca: veicamecatl: iuhquin mjxpolotinemj, motequjmati in tlachichioa.

Auh in jxiptla xocotl, in qujnacaiotiaia: mjchiouhtzoalli qujtlaliaia, çan cemjztac in amatl in qujmamaca, in jtech qujtlatlalia: amo ma tlacujlollo.

In jtech qujtlaliaia: yiamaneapanal, yiamamaxtli, itlotloma, yiamatzõ, ixococovipil, ixocovipil, vme: amo onacticac, çan quauhtitech caca: vme itzitziquiljpan: njman no contlalia oc ce itzitziquiljpan, vevei amatl, patlaoac: injc patlaoac, cen iollotli: matlacmatl injc viac, itlaiapan acitica in xocotl injc viac.

Auh no ereti tzocociol in qujchioa, qujquauhço: excan in qujquequetza: auh njman ie ic qujilpia in xõcomecatl, in vncan inepantla in xocotl matlactli.

Auh in oncocencauh: njmã ie ic qujquetza, njman ie ic tlacaoaca, tzatziua:

quitoa. Ma ecuel tiacahoane, ximotilinjcan, izquich amotlapal:

njmã ie ic quecatiquetzivi, conquechilitivi, in quauhxonmaçatl, yoan qujquãmjvia: auh in ieçtenc ie iauh, in ie mecatiquetztiuh: cenca tlacaoaca, cenca tzatziua, cenca chachalaca:

[483 401]

5. Probably pronounced in essence. Cf. the Jourdanet-Simeon edition, p. 129.
6. Reference could be to either paper or head (*ahcahuitl*); in the Spanish text, Sahagún appears to favor paper.

only misery, poverty, vanity, misfortune, and a life of woe.[4]

And if one were born at that time he was looked upon with fear; he was shunned. And if he were a man, they named him Nemon, Nentlacatl, Nenquizqui. Nowhere was he counted; he was not a man. And if it were a woman, [they named her] Nenciuatl.

And when [these days came], nothing was done; the palaces and courts were empty; no suits were judged. All stayed at home. None swept with brooms; they only fanned [the dust] with a fan, or a turkey quill, or with the wing of a bird; or they beat and cleaned with a cloak.

And no one might then quarrel; [for] this was strongly forbidden to people; it was severely forbidden to them. They were charged that none might wrangle. Neither might one sleep during the day. [If so,] it was said: "[So] shalt thou always."

Nor should anyone fall, or trip, or stumble. All walked softly. And to one who stumbled, they said: "Thou hast the Nemontemi; so shalt thou be. Be thou careful."

And whosoever then took sick and was ill, [of him] everyone said: "He hath sickened. Never more will he rise; no more may he have hope. That he will recover there is no hope." No longer had they hope for him.

And if one yet escaped [death], neither would any pay heed to him nor speak to him. It was said: "For it is only that he by whose grace we live hath acted and determined of his own will."

None, therefore, were comforted nor moved. His kin forgot him and laid him on the ground. No more might he be able to leave, to some degree get up [again], and take nourishment. For the setting in of the Nemontemi was terrifying.

For he had no day sign; he had no name; wherefore no one might, in truth, practice medicine and heal one, nor read the meaning of the days. For verily the days were not numbered; they had no count in all these four days.

linjlizt[l], nenquizcaiotl, nenquiçalizt[l], ſoneoaninemjlizt[l].

Auh in aquin vncan tlacatia, cenca tlamauhcaitililoia, tlatẽmachililoia: auh intla oquichtli qujtocaiotiaia Nemõ, nentlacatl, nenquizqui, acan ompouhquj acã, ompovi nenoquich. Auh intla cioatl: Nencioatl.

Auh in jquac y, atle aioaia, çan cactimãca in tecpan inteccali, amo tecutlatoloia, çan calonooaia; aiac tlachpanaia, ochpaoaztica: çan tlaiecapeviloia, ecaceoaztica, anoço totolmamaztica, totolaavitztica, anoço tlavivitequja, tlapopovaia tilmatica:

yoan aiac vel vncan maoaia, cenca tetlacaoaltiloia, cẽca tetlaquauhnaoatiloia, tetepiznaoatiloia, tecocoltiloia injc aiac maouz: ano ac cemjlhujcochia: vncan teilhujloia. Centicujz:

ano ac vel motlavitequja, motlcujnjaia, motepotlamjaia; nemaca, nenemoaia: auh in aquin motepotlamjaia: quilhujaia. Otimonemovi, ocenticcujc, ma ximjmati.

Auh in aquin ipan y, cocolizt[l] qujcuja mococoaia: mochi tlacatl qujtoaia, Concocolizcuj, aocmo quiçaz, aocmo motemachiz, in aço patiz, aocmo teumiolloti, aocmo itech ca netemachilli:

auh intla aca oc maquiça, aoc ac itlamatian aoc ac itlatoaian: mjtoa. Ca ça oicnotlama, in jpalnemoanj, ça oquimononomavili, oquimoioculili:

aocmo iuh catca teiõllo, ca oica netlapaloloc, neellaquaoaloc, oquizcauhque injouiolque, ca oiquitecaque: aocmo iuhcan qujzcoaiã inon oquẽtelizin, mocaticuetz, inon oihiio qujcujc, ca temauhti in jpan opeuh ilhujtl Nemõtemj:

ca atle itonal, ca atle itoca: ipampa aiac vel vncã ticitoca, tepatia, tetlapovia: ca nel amo vmpouhquj, atle ipooallo in jzquilhujtl navilhujtl.

4. The Tovar Calendar (Kubler and Gibson, op. cit., p. 36) adds that people did not gather at the temple, and that the priests performed no sacrifices nor other ceremony acts.

bloodied them. Then they laid as offerings upon the green reeds two thorns.

In all places—some of them perchance in two places, or three, they laid the thorns as offerings; or in five places, only when it was of their own will.

iatl yoan contequja in mevitztli, ꝛuh quexvjaia ic quivalmanaia in ipā acxoiatl vme in vitztli

noviian in aca ꝯo vccan anoço excan in quimanaia vitztli, anoço macuilcan çan teiollotlama.

796x 785 782

The Bloodying.

When they bloodied themselves, thus did they do: they cut their ears with an obsidian blade, and then took out blood from about the ears.

Neçolintli.

Jn mjçoia injc quichioaia itztli ica in contequja in jnacazco, ꝛuh njmā ic quivalpipiloinia in ezth in innacaztitlan. [412]

The Cutting of the Ears.

Likewise this bloodying was a cutting of the ears, when one was bloodied by the cutting of the ears.

Nenacaztequilintli.

Çan ie no iehoutl in neçoliztli in nenacaztequiliztli in mjçoia in monacaztequja.

The Twisting off of the Heads [of Birds].

The twisting off of the heads [of birds] was thus done: when they twisted the necks of small birds before the devil, also they dedicated [the blood] to him, and cast down [the body] before the devil. There the body of the small bird lay beating its wings.

Tlaquechcotonalintli.

Jn tlaquechcotonaliztli ic muchivaia ca icoac in tlatotoctzintli ixpan quicotonaia in Diablo no conjaviliaia, vncan contlaçaia in ixpan Diablo, vncan tlapapalaxtoc in jtlac in totoctzintli.

796x 782

The Eating [of Sacrificial Victims' Blood by the Gods].

Thus was done the eating [of sacrificial victims' blood by the gods]: When [the priests] had cut open a slave's or a captive's breast, then [the owner of the victim] took his blood in a vessel and, perchance, cast a paper into the vessel, which drew up the blood.

Then he took [the blood] in the vessel and placed upon the lips of all [the images of] the devils the blood of him who had died for the gods.

Tlatlatlaqualilintli.

Jnjc muchivaia tlatlatlaqualiliztli, in jcoac oconcltecque in tlacutli anoço malli, njman quicuja in iezço castica yoan aço amatl contlaçaia in caxic quichichinaltiaia in ezth,

njman ic quitquja castica in izquintin Diablome in tenco quintlatlalilinia in ezth muchintin in jezço teumjcquj.

The Payment of a Debt [to the Gods].

The payment of a debt [to the gods] was thus done: when maybap something had befallen one, perchance sickness, when he recovered, then perchance he thus paid his debt with *copal* [incense] or paper [spotted with] liquid rubber. Because he did

Nextlavalintli.

Jn nextlavaliztli injc muchivaia in jquac aço aca in tlein ipā muchivaia, aço cocoliztli in jquac opatic, njman aço copalli yoā amatl injc moxilavaia, injc [314]

443 and other water birds,[4] gulls,[5] and wild geese;[6]
643 maguey syrup and honey; hot chilis, chili from Atzitzinacan, small chilis,[7] chili powder, yellow chili, chili
656 from the Couixca, sharp-pointed red chilis, long
262 chilis, smoked chilis; small, wild tomatoes,[8] and ordinary tomatoes.

And separately were sold every kind of fruit: the American cherry, avocados, plums, guavas, sweet potatoes, manihot,[9] sapotas,[10] anonas,[11] yellow sapotas, sapotillas,[12] *tejocotes*,[13] tuna cactus, mesquite beans, marchpane, *cacomixtes*,[14] *cimate* roots,[15] squash cut in pieces, chayote,[16] squash seeds, *Canna* seeds;[17] and white fish, frogs, and water dogs; water fly eggs,
[314] water flies, lake scum, and red shellfish; and white
[317] paper made of the bark of trees, and incense, and
412 rubber, and lime, and obsidian; and firewood, and poles, logs, planks, and chips of wood; digging sticks,
[413] pointed oaken poles, hatchets, paddles, staves; maguey roots,[18] maguey fiber, and cured leather, and sandals; and copper axes, copper needles, and carpenters' and sculptors' copper chisels; and all manner of edible herbs—onions, water plant leaves, thistles,[19] amaranth greens and heads,[19a] purslane, mixed greens, varieties of sorrel;[20] tuna cactus fruit, sweet and acid; squash greens, tender young squash, squash blos-

tlalalacatl. Necuterzaoac, quauhnecutli, tonalchilli, atzitzinacaiotl chilli, chiltecpin, texiochilli, chilcoztli, coujxcaiotl chilli, mjkchilli, viiac chilli, pocheoac chilli, mjltomatl, xitomatl:

ioan nonqua monamaca, in jxqujtlamantli xochiqualli. Capoli, aoacatl, maçaxocotl, xaxocotl, camotli, quauhcamotli, teçontzapotl, eciotzapotl, atzaçotl, tzapotl, texocotl, nochtli, mjxqujtl, itlaaqujllo, chiancaca, cacomjtl, çimatl, aiotlatlapantli, chaiotli, aiooachtli, quauhaiooachtli, ioan iztac mjchin, cujatl, axolotl, aoauhtli, axaxaiacatl, tecujtlatl, izcujtli, ioan iztac quauhamatl, ioã copalli, ioan olli, ioan tenextli, ioan itztli, ioan tlatlatilquaujtl, ioan quaoacatl, quammjmjlli, vapalli, tlaxamanjlli, victli, vitzoctli, tlateconj, aujctli, matlaquaujtl, menelhoatl, ichtli, ioan cuetlaxtli, ioan cactli, ioan tepoxtli, quauhxeloloxj, ioan tepoxcoiolomjtl, ioan tepoxtli tlacujcujoaloxj, ioan tepoxtlaquauhicujloloxj, ioan in ixqujch tlamãtli qujlitl quaioxj, zonacatl, tzaianalqujlitl, vitzqujlitl, oauhqujlitl, oauhtzontli, itzmjqujlitl, qujllanenel, iztac xoxocoiolj, xoxocoiolujujlan, nopalli, xoconochtli, axoxoco, aioiacaqujlitl, aionanacatl, aioxochqujlitl, eçoqujlitl, .ezotl, elotl, xilotl, ooatl, mjiaoatamalli,

4. *Atzitzcanahuit*: "son redondillas, tienen los pecos largos, y agudos y negros; tienen los pies largos: son cenicientos y tienen el pecho blanco: dicen que nacen en la provincia de Atzitzcan: viven a ese Laguna de México entre las aguas o llanos: son muy buenos de comer. Dicen que beben, y los sordos del agua, por tiempo se ensueñan en pasos, dicen que les sea entrar a bandos en la mar, dexando del agua, y que tornan vida perezca" (*ibid.*, p. 170). Cf. also Sahagún, *Hist. Gen. Nueva España*, p. 125, n. 1; Cecilio A. Robelo: *Diccionario de Aztequismos* (Cuernavaca: Imprenta del autor, 1904), pp. 542-543. Santamaría, *op. cit.*, I, p. 487 (*chichicuilotes*) says there are two species—*Phalaropus wilsonii* SP and *Lobipes lobatus* L.

5. *Pipixcan*: "son blancos y del grandor de palomas, tienen alto vuelo, crianse sobre la mar, y al tiempo de cozer el maiz tornan acá desde a la sierra; cuando estos mueren mueren, entiéndese que es tiempo de cozer el maiz" (Sahagún, *op. cit.*, p. 183). In Santamaría, *op. cit.*, II, p. 415, these are *Larus franklinii* SW & Bich, currently called *apipixca*.

6. *Tlalalacatl*: "*Anseres mansiles* . . . . grandes como los de España: tienen los pies colorados y el pico, no pardillos: tienen buena carne: tienen debaxo plumas blancas y blandas, (y) de estas plumas se aprovechan para hacer mantas: las plumas de encima son recias, tienen buena cabeça para cozerlas" (Sahagún, *op. cit.*, p. 169). These (*tlalalacatl*), according to Santamaría, *op. cit.*, III, p. 184, are *Anser albifrons* GM.

7. Cf. Chap. 13, n. 22, *supra*.—"*Cuerno pluuio de chile llamado chilmecpin, muy tostado y molido con ello*" (Sahagún, *op. cit.*, p. 102)

8. Cf. Chap. 13, n. 20, *supra*.

9. Cf. Chap. 13, n. 10, *supra*.

10. Cf. Chap. 13, n. 7, *supra*.

11. Cf. Chap. 13, n. 8, *supra*.

12. Santa., *op. cit.*: none else, however, Chap. 13, n. 7, *supra*.

13. *Texocotl*: *tejocotes*—*Crataegus mexicana* Moc. (Santamaría, *op. cit.*, III, p. 156).

14. *Cacomixtli*: *cacomixtle*—*Tigrisia pennicia* Kerr; *acolmiztzintli*, of edible meat (*ibid.*, I, p. 254). Also Hernández, *op. cit.*, II, p. 457.

15. *Cimatl*: *cimate*, a condiment (Santamaría, *op. cit.*, I, p. 352). In Hernández, *op. cit.*, II, it is identified as *Dermatobium cimpliflorum* Hemsl. (p. 659) or *D. parviflorum* Mart. y Gal (p. 661).

16. *Chayotl*: *chayote*—*Sechium edule*; *Sechium edule*, *Cucumis acutangulus* (Santamaría, *op. cit.*, I, p. 477). In Hernández, *op. cit.*, I, p. 168, *Sechium edule* Sw.

17. In Hernández, *op. cit.*, I, pp. 171ff., various kinds of *quauhxayacachtli* are identified as *Jatropha curcas* Linn., *Manihot utilissima*? (?) Pohl, *Croton* sp., *Canna flaccida* Linn.

18. *Metlomitl*: *metl* (maguey), *milhuapatl* (principio, commienço, in Molina, *op. cit.*).

19. Ximenez, *op. cit.*, p. 213, notes that Simeon must be in error in translating *acuxcalitl* as cardoon, since the latter is not native to Mexico; the Rafinesque MS (Fls. 10, 73) illustrates a thistle (*Cirsium* sp.). Santamaría, *op. cit.*, II, p. 82, describes it (*pitzopatlin*) as, "*En Méjico especie de alcachofa.*" (*a/cachofa*).

19a. See Beyer, *op. cit.*, pp. 545-6, 549. Ximenez suggests that "*huauhtzontli* may be a corruption of . . . *cuauhtzontli*," a championion: *C. Humulifer* and *C. pusillanus* are mentioned.

20. *Xocotzintli*: *tronpal*—*Oxalis angustifolia* H. B. K.; *O. corniculata* L.; *O. spiraphylla* Cav.; *O. corniculata* Dc. (Santamaría, *op. cit.*, II, p. 154). Ximenez (*op. cit.*, p. 236) mentions other varieties of *Oxalis*, but on p. 213 notes that the term served to used also for *Rumex* (subgenus *Acetosa*), and that contemporary Mexican identifies two species of *Begonia*.

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8: Barlow E-4 (no date)1949 NU7 Aztec NU7

TRIBUTE 651

Tribute of the whole province.—Acolhuacan Province is said to have given the following tribute:

CLOTHING [291]

2,000 bundles of large white "twisted" mantles**
1,200 bundles of rich thin mantles, in three styles**
400 bundles of loincloths** [714]
400 bundles of women's skirts and blouses**
121 warriors' costumes with shields ("one fine piece")**

FOOD [262]

4 wooden bins (1 each of maize, beans, chian, and huauhtli)

Tribute of the component towns.—Acolman (a) rendered tribute 632 of henequen garments, in bundles of twenty, every quarter, and 651 maguey leaves for fuel, but, to judge from a statement in the *Papeles de Nueva España* (6:213), this seems to have been destined for the local cacique.

Cenpoalan at first gave obsidian knives for war clubs to Texcoco. [412] After passing into Mexican hands it gave a canoe annually, and then, in the time of Moctezuma's predecessor, fowl and other things.*

Epaçoyucan and adjacent towns paid only obsidian knives until [412] Ahuizotl enlarged the temple of Huitzilopochtli and increased tribute demands generally. Thereafter they paid mantles and maize and domestic fowl.*

** Corrected from the *Mendocino* version: 103 pieces, 3 fine.

* RHE, 1:131: "estos quatro pueblos y sus sujetos eran en tiempo de su gentilidad del señor de tetzcuco netzavvalcoyotzin andando el tiempo y siendo señor en mexico ytzcohuatzin pasaron los pueblos de senpuala y tlaquilpa y tecpilpa al señor de mexico solamente tzaquala se quedo en el senorio que sobre ellos tenia y reconocian siempre el Reyno de tetzcuco Reyno de aculhuaca tributaban nabajas con que hazian macanas y despues andando el tiempo y siendo señor en mexico ytzcohuatzin mucho tiempo no tributaron nada sino solamente cada año llebaban vna canoa a mexico hasta que en tiempo de ahuitzotzin antesesor de monteçuma fue el primero que mando tributasen mantas gallinas y todo genero de bolateria [this for a new temple] como sucedio Monteçuma en su lugar no quiso personarlos tributos."

* RHE, 1:142: "eran del señorio de tezcuco ... no tributauan nada solamente nabajas con que hazian macanas y siendo senor en mexico ytzcohuatzin pidiole al señor de tezcuco que no tenia muchas tierras que le diese algunos pueblos de la comarca de mexico entonzes se dividió este pueblo porque gozase tambien el señor de mexico las nabajas la mitad llevó el de tetzcuco y otra mitad el de mexico y entró tambien otros pueblos debaxo del señorio de mexico como cenpohuala tlaquilpa pachuca teçontepec y temazcalapa todos estos pueblos pasaron a mexico y estos pueblos ayudauan a sacar nabajas y no tenian otro tributo hasta que vino a señorear el antecesor de moteçoma que

11:Diaz T,H-5 (1519-1520) 1910
NU7 Aztec NU7

apart from the great Cue there was another small tower which was also an Idol house, or a true hell, for it had at the opening of one gate a most terrible mouth such as they depict, saying that such there are in hell. The mouth was open with great fangs to devour souls, and here too were some groups of devils and bodies of serpents close to the door, and a little way off was a place of sacrifice all blood-stained and black with smoke, and encrusted with blood, and there were many great ollas and cántaros and tinajas[1] of water inside the house, for it was here that they cooked the flesh of the unfortunate Indians who were sacrificed, which was eaten by the priests. There were also near the place of sacrifice many large knives and chopping blocks, such as those on which they cut up meat in the slaughter houses. Then behind that cursed house, some distance away from it, were some great piles of firewood, and not far from them a large tank of water which rises and falls, the water coming through a tube from the covered channel which enters the city from Chapultepec. I always called that house "the Infernal Regions."

Let us go on beyond the court to another Cue where the great Mexican princes were buried, where also there were many Idols, and all was full of blood and smoke, and it had other doorways with hellish figures, and then near that Cue was another full of skulls and large bones arranged in perfect order, which one could look at but could not count, for there were too many of them. The skulls were by themselves and the bones in separate piles. In that place there were other Idols, and in every house or Cue or oratory that I have mentioned there were priests with long robes of black cloth and long hoods like those of the Dominicans, and slightly resembling those of the Canons. The hair

[1] Names of various large pottery vessels for holding water and cooking.

13: Phillips U-4 (no date) 1925
NU7 Aztec NU7

THE METAL INDUSTRY OF THE AZTECS

By GEORGE BRINTON PHILLIPS

I

121 325 THE collections of many thousand copper objects, tools, weapons, and ornaments from ancient Indian burial mounds and village sites in the Unites States of North America is strong evidence in favor of a pre-Columbian copper industry with which the aborigines were familiar before they reached the Iron Age. Did this knowledge and use of copper extend into Mexico and adjacent country of Central America?

325 Prescott in his *Conquest of Mexico* gives a picturesque account of the splendors of the court of the Montezumas with its silver and gold ornaments and utensils, but the knowledge of metals does not seem to have extended to the general use of copper or bronze for tools and weapons. The Aztec in the production of ornaments in the precious metal showed great skill and artistic workmanship and specimens sent over to Spain were greatly admired by the Spanish goldsmiths. Owing to scarcity of copper [412] in their immediate vicinity, the ancient Mexicans confined its use to adze blades, chisels and some copper objects, possibly ceremonial implements. The tools were hardened by hammering and used in wood carving. The stone cutting it is believed was still done with flint tools.

317 325 Copper was obtained from the mines of Zocotallan where it occurred in masses on the surface and also from the galleries opened in the rock. Ancient workings have been discovered at Cerro del Aguilar in Guerrero, and the Zapotec country was well known for its copper mines. Deposits of tin were also found in Guerrero at the mines of Tasco, and it is said that Cortez obtained enough tin from that source with the copper to cast several large cannon, which he used in his fortress at the siege of Mexico. This use of tin in making a suitable alloy it is believed was due to the familiarity the Spaniards had of bronze, rather than to Aztec knowledge of the art.

13: Phillips U-4 (no date) 1925
NU7 Aztec NU7
Tarasco N434
Zapotec N444

The Aztec people had, however, some knowledge of metallurgy, for they melted the copper and cast it in moulds, an art which the aborigines in the United States never seem to have acquired. Cortez tells us that in the markets of the City of Mexico

> "hatchets were sold made of copper alloyed with tin and that this alloy was used with a silicious powder with which they cut the hardest stones."

The Spanish historians speak of Cholula, a very ancient City of Mexico, founded before the arrival of the Aztec, which excelled in metal working, and that the Tarascans living west of the valley of Mexico were familiar with copper found in the mountains in that district, which they worked into defensive armor, body plates of wood covered with sheet copper. They also state that the Zapotec made ornaments of copper obtained from the mines in Oaxaca.

Copper implements, however, were not common near the City of Mexico but were plentiful in Oaxaca, Michoacan, and the Jalisco region. The T-shaped implements were found at Mitla, Central America, being abundant in the Zapotec country. The objects, some made of very thin sheet copper, others heavier, possibly cast, are of uncertain use; those too thin to be used as tools for wood or stone, are thought to be instruments used in their feather work or pottery, others regard them as a money currency or exacted as tribute paid to the City of Mexico by the neighboring cities, this latter being the general opinion.

The number as well as the variety of copper objects from Mexico found in our Museum collections, is rather limited, consisting of a few copper ax heads, chisels, large and small, little bells, finger rings, beads and pins. The peculiar T-shaped objects are the most abundant, differing somewhat in shape and size. An analysis of one of them in the Peabody Museum at Cambridge, proved it to be simply copper. It was doubtful if the ancient Aztec had a knowledge of bronze or knew how to obtain it until shown by the Spanish invaders, and such analyses of Mexican metal objects, giving a percent of tin to indicate a true bronze, may have been implements made after the instruction by the Spaniards. Some copper tools from Mexico when analyzed showed a small amount of tin believed to have been an impurity in the

And [concerning] this pestle: when they caught, trapped mice,[24] they cast the pestle out the doorway. It was thought that if it were in the house, they could not be caught; it was said that it would warn them.[25]

Yoan in iehoatl tezolotl: in jquac quimaci, in quinamôvia quiquimjchtin: in tezolotl quiiaoac quioallaça, quilmach: intla çan cali iez: amo vel macizque in quiquimjchti, quilmach çan quimonjoatica.

825
412

Twenty-second Chapter, which telleth of mice.

Injc cempoalli onome capitulo, intechpa tlatoa in quiquimjchti.

825
837

They said, in times past, that it was thought that mice knew well him who had a paramour, whether a young man or a woman. In order for it to be evident, the mouse made a hole in a large basket, or gnawed the edges of gourd dishes or bowls. Likewise, if men, or a woman, were married, he made holes in their mats, or the men's mantles. In the same way, he gnawed through a woman's shift or skirt. And everywhere the mouse made holes. It was said that thereby he made known that one's spouse had committed adultery.

Quitoaia in ie vecauh, quilmach in quiquimjchti vel quimati, in aquin momemecatia: in aço telpuchtli, anoço cioatl. Injc neci in quimjchin quicoionja in chiquivitl, anoço tecomatl, anoço xicalli quitenquaquaia. No iuhque intla namjque toquichtin, anoço cioatl: yn japetl, anoço yn jtilma toquichtin quicoionjaia: çā no iuhquin cioatl, yn jcue, anoço yn jvipil quicoionja: yoan noujan tlacocoionja in quimjchin, quil ic quinencaiotia: ca oquitlaxin yn jnamjc.

Twenty-third Chapter, which telleth of turkey hens.

Injc cempoalli oney capitulo, intechpa tlatoa in totolme.

825
235

Turkey hens: when they were brooding, one who wore sandals might not go in among them. Especially when the chicks were about to break [the shells], it was said that [the hens] sat paralyzed. [The chicks] could not break [the shells, and] some would die. But some, when they hatched, it was thought, would only be paralyzed, those which were there in the shells. And it was said that in order that this might not happen, they placed old sandals among them when [the hens] brooded.

In totolme: in jquac tlapachoa, amo vel inpan calaquj in mocactia: oc cenca yquac in ie tlapanjzque totolti, quilmach ic mocotoztlalia: amo vel tlapanjzque, cequjntin ic mjquj: auh in cequjntin yn jquac tlacati quil çan cocototzpipil, in vncan cate in cacalloc. Auh quil injc amo iuh muchioazque yn, cacçolli intlan quitema in tlapachoa.

Twenty-fourth Chapter, which telleth of turkey chicks.[26]

Injc cempoalli onnavi capitulo, intechpa tlatoa yn totolconentoton.

825
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837

And when turkey chicks hatched, one might not enter among them who had a paramour, whether woman or man, or those who were married. When perchance the spouse [of one of them] had committed adultery, if he were to go in among [the chicks], they said: "He killeth them through filth."

Auh in jquac otlacatque in totolconentoton: avel inpan calaquj in momecatianj, in aço cioatl, in anoço toquichtin, in anoço namjqueque: in jquac in aço oquitlaxin inamjc, intla inpan ocalac, quitoa: quintlaçolmjctia.

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24. *Ibid.*: "quando arrancan ratones en casa."

25. *Ibid.*: "no entran los ratones: porque el casado, los sujetos para que no empuerca."

26. Pandoxeutomos: read tandoxeutomos.